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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,044	12/06/2001	Hajime Matsumoto	43247	4952

1609 7590 02/06/2006

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EXAMINER

PUTTLITZ, KARL J

ART UNIT

PAPER NUMBER

1621

DATE MAILED: 02/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/003,044	Applicant(s) MATSUMOTO ET AL.	
	Examiner Karl J. Puttlitz	Art Unit 1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5, 6 and 8-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6 and 8-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The rejection under section 103 over Murayama in view of Matsumoto is withdrawn since Matsumoto does not qualify as prior art since the subject matter in Matsumoto and the claimed invention were, at the time the claimed invention was made, owned by the same person or subject to an obligation of assignment to the same person. See section 103 (C)(1).

The rejection under Murayama is withdrawn in favor of the following new ground of rejection:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5, 6 and 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,709,928 to Murayama et al. (Murayama) in view of U.S. patent No. 4,317,962 to Sato et al. (Sato), in further view of *Kirk-Othmer Encyclopedia of Chemical Technology* (Kirk Othmer)

Murayama teaches the production of hydroxyalkylacrylates from the reaction alkylene oxides and acrylic or methacrylic acid. See column 1, lines 30-42.

The patent teaches a distillation of the reaction mixture to produce a distalate containing methacrylic acid (MAA in Table 1):

TABLE 1

	Additive at the time of distillation (vol %)	Reaction yield (mol percent)	Distillation yield (wt. percent)	Composition of product			Type of product (AFHA)	Material adhered to heating portion of distillation still
				HEMA wt. percent	MAA wt. percent	EDMA wt. percent		
Example 1	Triethyleneglycol	92.8	88.0	83	0.6	0.3	2	Not observed.
Comparative example 1	Diisobutylphthalate	97.0	98.6	88	5.4	0.8	2	Observed.
2	None	92.8	88.3	83	3.4	0.3	2	Do.

Murayama fails to explicitly teach the addition of polymerization inhibitors. It is for this purpose that the examiner joins Sato. Sato teaches that it is well known that acrylic acid polymerizes so readily that, its polymer tends to be formed in the apparatus, particularly in the respective distillation towers, frequently impeding the operations of the apparatus and thus leading to a lowering of yield of acrylic acid to be a product. To avoid this, there has been widely accepted heretofore, as a method of inhibiting the polymerization of acrylic acid, a method of adding polymerization inhibitors to the steps, particularly to the absorption and distillation towers. As a typical polymerization inhibitor there is well known hydroquinone, which is generally used in combination with other effective polymerization inhibitor such as molecular oxygen, phenols, e.g., phenol, cresol and tert-butyl catechol, amines, e.g., diphenylamine, phenothiazine and methylene blue, quinones, e.g., hydroquinone monomethylether, or inorganic and organic salts, e.g., copper dimethyldithiocarbamate, copper diethyldithiocarbamate, copper dibutyldithiocarbamate and copper salicylate. See column 1, lines 23-53. Accordingly, those of ordinary skill would have been motivated to add polymerization inhibitors any distillation where acrylic acid or MAA is present, and is therefore, prima facie obvious.

Applicant maintains that Murayama fails to teach the recycling of methacrylic acid. However, those of ordinary skill would be motivated to recycle raw materials isolated from a reaction product in order to increase reaction efficiency, and therefore, recycling methacrylic acid as a raw material is prima facie obvious. This is especially true for valuable reagent such as MAA or its derivatives, which are industrially important chemicals, See Kirk Othmer. Therefore, notwithstanding the fact that neither Murayama nor Sato teach recycle of methacrylic acid, its recycle is well within the motivation of those of ordinary skill in order to recover a valuable reagent.

Oath/Declaration

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:
Receipt is acknowledged of papers filed under 35 U.S.C. 119 (a)-(d) based on an application filed in Japan on 1/10/2001. Applicant has not complied with the requirements of 37 CFR 1.63(c), since the oath, declaration or application data sheet does not positively claim priority to the filing of any foreign application, but merely lists the foreign application. A new oath, declaration or application data sheet is required in the body of which the present application should be identified by application number and filing date.

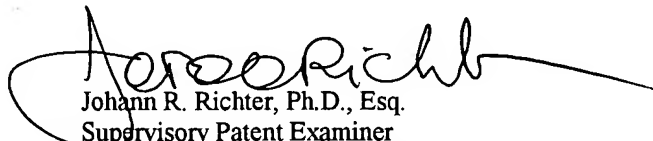
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl J. Puttlitz whose telephone number is (571) 272-0645. The examiner can normally be reached on Monday to Friday from 9 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter, can be reached at telephone number (571) 272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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